

~~Prepenty~~ Road Bridge
Spanning Jennings Run
Corriganville
Allegany County
Maryland

HAER No. MD-109

HAER
MD
1-COR,
1-

Written Historical and Descriptive Data
Reduced Copies of Measured Drawings
Photographs

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
P.O. Box 37127
Washington, D.C. 20013-1727

HISTORIC AMERICAN ENGINEERING RECORD

PROENTRY ROAD BRIDGE

HAER No. MD-109

HAER
MD
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Location: Spanning Jennings Run
Corriganville
Allegany County
Maryland

UTM: 17.688325.4395600
Quad: Cumberland Quadrangle

Fabricator: Unknown

Date of Construction: Unknown, re-erected 1926, altered 1968-69

Present Owner: Allegany County
Cumberland, Maryland

Present Use: Vehicular Bridge

Significance: The Proentry Road Bridge is significant as one of three steel pony truss bridges remaining in Allegany County. These and other similar bridges were important in the growth of the transportation network in Maryland during the late nineteenth and early twentieth centuries.

Project Information: This documentation was undertaken June through October 1994 in accordance with a contract with the Allegany County, Maryland Department of Public Works as a mitigative measure prior to the removal or relocation of the bridge, in accordance with Article 83-B, Section 5-618 of the Annotated Code of Maryland.

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Overview

The Proentry Road Bridge is one of three remaining steel pony truss bridges in Allegany County. The single span bridge was reassembled across Jennings Run in Corriganville, Maryland in the late summer of 1926. Neither the manufacturer nor the original location of this bridge has been identified. This bridge employs the Pratt Truss System whose simplicity made it suited to standardized manufacture and catalogue marketing. The ease with which this bridge type could be erected, dismantled, moved, and reassembled aided in the expansion of the secondary highway system which reached into rural Maryland in the first decades of the twentieth century.

The present site of this Pratt Pony Truss is at Corriganville, Maryland, approximately five miles north of Cumberland. The Corriganville section of the county has been associated with the highway and railroad network which connected Cumberland to the industrial center at Mount Savage. The Maryland & New York Iron Company opened nine miles of rail line from the Narrows near Cumberland along Jennings Run to Mount Savage in the spring of 1845.¹ Specifically, the Proentry Road Bridge connects the Kriegsbaum section of Corriganville which lies south of Jennings Run, with State Route 36.

Description

The single span Proentry Road Bridge is 77'-3" long and 19'-10" wide. Rakers support the upper chord and extend from the lower joints 2'-4". The wooden deck is 15'-7" and carries a single lane of traffic. Verticals measure 9'-0" from pin to pin. Each truss is composed of five panels, with three center panels 15'-2" in length and two end panels 13'-6" in length. The center panels exhibit tension diagonals as well as counter diagonals that are typical of the Pratt Truss, with a single hip vertical (in tension) adjacent to the inclined end post in the end panels. Pinned connections are found throughout the structure and the floor beams are hung from the pins in the lower chord with U-bolts.

Some members, which appear to be original to the structure, bear the markings "Jones & Laughlin." Jones & Laughlin, Ltd. (J&L) which was located in Pittsburgh on the Monongalia River was formed in 1852 and converted to steel manufacture in 1886. J&L did not become involved in the mergers which culminated with the formation of US Steel in 1903 and subsequently emerged as a major independent

¹Harry I. Stegnaier, Jr., Allegany County: A History (Parsons, WV: McClain Printing Co., 1976), 141.

steel maker in the decade prior to World War I.² US Steel markings are embossed on replacement stringers which were installed in 1968.

Alterations

By 1968 the condition of the Proenty Road Bridge had deteriorated to the extent that a weight restriction of 8,000 pounds was imposed on the structure. At that time, Allegany County modified the bridge by installing a continuous stringer composed of 10" I-beams to support the floor beams. Additional strengthening measures were undertaken the following year, when a concrete central pier and steel stringers and channels were introduced to support the continuous beam. The 1968-69 modifications resulted in a stronger two-span structure that allowed the bridge to return to normal service.

Two additional modifications of uncertain date are found in the structure. One, torch cuts in the upper chords of the central panels in both the east and west trusses have been repaired with gusset plates. Gusset plates are located top and bottom of the chord, as well as on either side of the web at each break. Either side of the breaks in the chords exhibits cut marks, which may be interpreted as match marks. The characteristics of this repair indicate it may have taken place when the bridge was cut to be removed from its original location. Two, the bearing ends of the bridge have been encased in concrete preventing their inspection. The second modification may have taken place when the central pier was installed in 1968-69.

The Pratt Truss

By the turn of the twentieth century, the Pratt Truss had become an important bridge type to the transportation network in the United States. The Pratt Truss was developed by Thomas and Caleb Pratt and patented in 1844. It is set apart from other similar designs by vertical members acting in compression and diagonals acting in tension. This tends to shorten the length of the compression members which, in turn, reduces bending and buckling in compression members. In the traditional Pratt system,

such as that found at Proenty Road, the hip verticals are in

²Paul F. Paskoff, ed., Encyclopedia of American Business History and Biography: Iron and Steel in the Nineteenth Century, (New York: Facts on File, Inc., 1989), 204-205. J&L remained an influential independent manufacturer well into the mid-twentieth century and continued production as J&L into the 1980s.

tension and the inclined end posts are in compression.³

By the end of the nineteenth century, approximately 90 percent of all American metal highway bridges were of either Whipple (trapezoidal) or Pratt design.⁴ The simplicity of the Pratt design was the key to its success and made it ideally suited for standardized manufacture and catalogue marketing. Bridges of this simple design were easily manufactured, transported, and erected; and could be disassembled, moved, and reassembled in another location. The versatility of such bridge designs, coupled with their relative ease of reassembly at a second site, aided the expanding transportation matrix of the early twentieth century as it moved into rural areas. As testament to the design's worth, a number of Pratt trusses remain in use on low-volume secondary highways late in the twentieth century.

A Bridge for Corriganville

Prior to 1926, residents of Corriganville who lived south of Jennings Run were served by a footbridge at Ford's Crossing (the approximate site of Proenty Road Bridge). At the April 2, 1924 meeting of the Allegany County, Board of Road Directors, residents of Corriganville led by Henry Ford, a local merchant, requested the construction of a vehicular bridge at the Ford's Crossing location⁵ to replace the footbridge which served the community. That footbridge, which had often been damaged in flood waters, had again been washed away in the March 1924 Wills Creek Flood. The Cumberland Evening Times reported the event as the "worst flood in twenty-two years."⁶ The residents of Corriganville related that they were able to reach their homes only by fording the stream or taking a circuitous route through neighboring fields.

Residents of the community had lobbied the Road Directors for a number of years for a bridge at the Ford's Crossing location without success. At their May 7, 1924 meeting, the Directors declined to erect a bridge at that site because the requested

³Allen Comp and Donald Jackson, "Bridge Truss Types: A Guide to Dating and Identifying", (Nashville, TN: The American Association for State and Local History, n.d.), 3.

⁴David Weitzman, Traces of the Past: A Field Guide to Industrial Archaeology (New York: Charles Scribner and Sons, 1980), 73. Observed by J. A. L. Waddell, noted nineteenth Century engineer. Whipple patented the bowstring truss in 1841 and the trapezoidal truss (alternately known as the Whipple-Murphy, Linville, or double intersection Pratt) in 1847.

⁵Cumberland Evening Times, Wednesday, 2 April 1924, LVII No. 79, p 5.

⁶Cumberland Evening Times, Saturday, 29 March, 1924, LVII-No. 76, p 1.

bridge did not connect two roadways. However, at that meeting Henry Ford was awarded \$25 for repairs and upkeep of the damaged footbridge.⁷ No records indicate further action concerning the construction of a bridge at Ford's Crossing occurred until 1926.⁸

At the July 7, 1926 meeting of the Road Directors, an agreement was signed between the Road Directors and Henry Ford on behalf of the residents of Corriganville to construct a steel bridge at the Ford's Crossing site. The agreement, which was the culmination of a number of years of negotiation, stipulated that the residents of the community would provide the necessary stone and cement, and assume the responsibility for construction costs, piers, grades, and fills. The Cumberland Evening Times reported that the residents had raised \$1000 in subscriptions from residents of the village.

As a result of the replacement of bridges in the county, the Road Directors found themselves in the position of holding a "spare" one-lane steel bridge. They agreed to give the bridge to the Corriganville location if the local citizens were able to provide funding for the construction of the necessary support systems.

With the agreement in hand, Ford took charge of erecting the abutments for the bridge, thus the north abutment bears his name and the date 1926. Subsequent construction would be supervised by County Engineer D. P. Lefevre.⁹

During the 1920's the State Roads Commission was engaged in a program to upgrade roads in the state. Its mission was "improving safety and comfort of the main roads while building up the secondary system of the State, the farm-to-market network of feeder highways."¹⁰ Specific elements of the Commissions program during the era were: signposts, safety instruction signs, center lines, banking curves, snow removal, and widening single lane roadways and bridges.¹¹

⁷Cumberland Evening Times, Wednesday, 7 May 1924, Vol. LVII-No.109, p9.

⁸Minutes of the meetings of the Board of Road directors are not available in the Allegany County records after 1924.

⁹Cumberland Evening Times, Wednesday, 7 July 1926, Vol. LVIII-No. 161, p. 9.

¹⁰State Roads Commission of Maryland, A History of Road Building in Maryland (Baltimore: Maurice Leaser Co., 1958), 69.

¹¹*Ibid.*, 69-74.

To fulfill the commitment to widen single lane roadways and bridges, four one-way or dangerous bridges were replaced on the National Pike in Allegany County in 1925. The crossing at Sideling Hill Creek was replaced with an 85' concrete arch, the crossing at Flintstone Creek with a 46' concrete arch, the crossing at Town Creek with a 71' concrete arch, and the crossing at Evitts Creek with a 57' concrete arch. With the completion of the bridge upgrades in Allegany County, the State Roads Commission could boast a 200 mile highway from Baltimore to the West Virginia State line (Oakland, MD) without a single one-way bridge.¹²

When all factors--need, availability, funds--coalesced into a workable plan a somewhat isolated area of the county could be joined to the growing highway network in western Maryland. This may be interpreted as an excellent example of the Commissions goal to expand its network of feeder highways. No further information regarding the bridge in either the Road Directors Minutes (none available after 1924) or in The Cumberland Evening Times through the remainder of 1926 is available.

Conclusion

The Cumberland Evening Times clearly states that "the bridge that is to be erected was recently removed by the State Road Commission, when wider bridges were put in on roads in the county," but makes no mention of the original location of the Proenty Bridge.¹³ Local tradition locates the original site as a crossing of Evitts Creek east of Cumberland.¹⁴ Although an Evitts Creek bridge was replaced in 1925, its replacement span of 57' is inconsistent with the span of Proenty Road Bridge (77'). The 71' replacement span on Town Creek indicates that the Town Creek crossing is the most likely candidate for the original site of the Proenty Road Pratt Truss. Neither the tradition nor the above conjecture can be substantiated by state or county records or newspaper accounts. Additionally, the manufacturer cannot be identified from state or county records, nor from the manufacturer's plate which is not available.

¹²State Roads Commission of Maryland, Reports of the State Roads Commission (Baltimore: State Roads Commission of Maryland, 1927), 59-61.

¹³Cumberland Evening Times, Wednesday, 7 July 1926, Vol. LVIII-No. 161, p. 9.

¹⁴Glenn A. Ford, Interview by Kevin Beachy, 12 October 1993, Correspondence of Kevin Beachy, Allegany County Public Works, Cumberland, Maryland. Records check with the Maryland State Highway Administration, Records Division and Historian, have not confirmed this tradition.

Although several manufacturers of this general type bridge are found in the region, no particular detail of the Proenty Road Bridge distinguishes it as a specific manufacturer's model. Neither David Simmons of the Ohio State Historic Preservation Office nor Emory Kemp, Director of the Institute for the History of Technology and Industrial Archaeology, both recognized authorities on metal truss bridges, can identify the bridge manufacturer. Nevertheless, bridges of this genre made possible the expansion of secondary or feeder highway systems during the early decades of the twentieth century. Their worth is further legitimized by the number in service in the last decades of the century.

Methodology

The research methodology used in the preparation of this document included on-site inspection, Allegany County records search, State Roads Commission records search, Frostburg State University Special Collections search, Cumberland Evening Times search, as well as consultation with metal truss bridge experts. Although this methodology did not reveal certain specific details of the Proenty Road Bridge, it remains an important artifact in the development of Allegany County highway system.

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